

**Notice of Allowability**

Application No.

10/518,008

Examiner

Robert Sellers

Applicant(s)

SAITO ET AL.

Art Unit

1712

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_.
2. ☒ The allowed claim(s) is/are 1-10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 12/14/2004, 3/14/2005 and 3/23/2006
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

Robert Sellers  
Primary Examiner  
Art Unit: 1712

Art Unit: 1712

The following is an examiner's statement of reasons for allowance:

1. The closest prior art is Kobayashi et al. Patent No. 6,197,149 disclosing a blend of an epoxy resin (col. 7, lines 56-59) and from 5 to 350 parts by weight per 100 parts by weight of resin solids (col. 9, lines 4-7) of aluminum borate whiskers (col. 5, lines 58-61) having an average diameter of from 0.3 to 3  $\mu\text{m}$  (col. 6, lines 18-25). Okano et al. Patent No. 5,965,245 (equivalent to Japanese Patent No. 9-136272 cited in the Information Disclosure Statement filed March 14, 2005) also teaches an epoxy resin formulation (col. 5, lines 37-41) containing aluminum borate whiskers with the same average diameter (col. 4, lines 37-41 and 55-62) albeit at a lower concentration of from 5 to 50% by volume (col. 6, lines 16-17).
2. The claimed average fiber diameter of 0.25  $\mu\text{m}$  or less is not recited. Both Kobayashi et al. and Okano et al. attribute deteriorious mixing in the resin varnish and coating workability when the aluminum borate particle size is less than 0.3  $\mu\text{m}$ . Since the closest prior art to Kobayashi et al. and Okano et al. teach away from the claimed maximum of 0.25  $\mu\text{m}$ , the claimed average fiber diameter range is distinguishable over those of the references.
3. Japanese Patent No. 8-20708 describes an epoxy resin composition containing 0.5-30 parts by weight per 100 parts by weight of the epoxy resin of aluminum borate whiskers with an aspect ratio of from 3 to 500.

Art Unit: 1712

4. Tachikawa et al. Patent No. 6,348,523 (col. 2, lines 9-19 and cols. 3-4, polyepoxy Compound No. 5) and Japanese Patent No. 2001-354836 (Japanese '836, CAPLUS abstract) set forth mixtures of epoxy resins such as 2,2-bis(3,4-epoxycyclohexyl)propane (embraced by claim 7) and a reaction product of a bisphenol A diglycidyl ether and a carboxy-terminated butadiene-acrylonitrile copolymer (encompassed by claim 6 and epoxy-reactive phosphorus-containing flame retardants shown on page 14 of the instant specification (Tachikawa et al., col. 5, lines 21-22, tetrakis(2,6-dimethylphenyl)resorcinol diphosphate and Japanese '836 (page 3, paragraph 12, phosphoric acid amide compound (III)). The claimed aluminum borate whisker having an average diameter of 0.25  $\mu\text{m}$  or less is not recited. There is no cited prior art establishing the obviousness of employing aluminum borate at such a small average diameter.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled

"Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

rs 6/14/2007



ROBERT E.L. SELLERS  
PRIMARY EXAMINER